

BESER VIII (choice based) Summer 2020 ELEC

Time : 3Hours

Total Marks 80

14/5/20

- NB: 1) Question No. 1 is Compulsory.
 2) Attempt any three Questions out of remaining five Questions.
 3) Assume suitable data if necessary and justify the same.

- Q1. Answer any four the following questions
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| A) Explain odd and even harmonics present in power system | 05 |
| B) What are the different methods for power factor correction? | 05 |
| C) Explain load compensation, state its objective. | 05 |
| D) What are the limitations of FC TCR? | 05 |
| E) List different disturbances present in the power system. | 05 |
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| Q2 A) Explain the working principle of TSSC along with VI characteristic. | 10 |
| Q2 B) What is power factor when both voltage and current are sinusoidal? | 10 |
| Q3 A) Explain the power flow in Mesh system. | 10 |
| Q3 B) Explain the mitigation of harmonics using active filter? | 10 |
| Q4 A) Why FACTS are used in power system? | 10 |
| Q4 B) Write the short note on PQ theory? | 10 |
| Q5 A) What are the main causes and sources of voltage unbalance? | 10 |
| Q5 B) Write the short note on loading capability of transmission line. | 10 |
| Q6 A) Write the short note on STATCOM. | 10 |
| Q6 B) Why transmission interconnection is needed? | 10 |